

Claims

What is claimed is:

SUB A' 1. Electrical switching apparatus for flexibly interconnecting a plurality of signal endpoints, the apparatus comprising:

5 a first circuit for receiving at least one input signal from at least one input endpoint; and

a second circuit for sending at least one received signal to at least one output endpoint.

10 2. The apparatus of Claim 1 wherein:

at least one input signal comprises a data signal that is received in serial form including a plurality of data channels interleaved therein.

3. The apparatus of Claim 2 wherein:

15 the first circuit comprises at least one barrel shift register for receiving at least one received input signal which comprises serial data, and the second circuit comprises at least one multiplexer, at least one such barrel shift register being selectably coupled to at least one such multiplexer, thereby effectively enabling digital signal switching simultaneously between multiple input and output endpoints.

20 4. The apparatus of Claim 1 wherein:

at least one input signal comprises a data signal that is received in parallel form and converted to serial form.

5. The apparatus of Claim 2 wherein:

5 the first circuit comprises a barrel shifter for interconnecting a plurality of received input signal at different times.

6. The apparatus of Claim 1 wherein:

10 at least one of the input or output endpoints corresponds to at least one pin for a coder/decoder (codec) device, such codec device being compliant with an AC97 or an I2S convention.

7. Method for electronic signal coupling, the method comprising the steps of: ✓

15 receiving a first set of digital signals, the received first set of digital signals being provided to a plurality of barrel shift registers; and

transmitting a second set of digital signals, the transmitted second set of digital signals being provided from a plurality of multiplexers;

wherein the multiplexers are switchably connectable to the barrel shift registers, such that at least one signal selected in the first set of digital signals is selectably
20 interconnected for transmission in the second set of digital signals.

8. The method of Claim 7 wherein:

the first set of digital signals comprises a data signal which is received in either serial or parallel form, the data signal being converted to serial form when received in parallel form.

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9. The method of Claim 8 wherein:

a plurality of digital signals in the first set are transmitted as digital signals in the second set separately at different times.

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10. The method of Claim 8 wherein:

at least transmitted digital signal is coupled to at least one pin associated with a coder/decoder (codec) according to an AC97 or I2S signal interface.

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Add #2

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